

Superconducting continues to challenge theorists: 50 years after publication of the first widely accepted theory on the physics of superconductors, researchers from the Lab, the University of Edinburgh, and Cambridge University proposed the existence of a second mechanism, suggesting that in certain materials superconductivity arises from an absence of the interactions that normally take place between electrons and the vibrational motion of the material's structure. The existence of a second mechanism could mean that it would be possible to develop an entirely new class of superconductors, which might be better suited to practical applications.

New superconducting theory might have significant practical applications